

# **Hazardous Substance Poster**

## **Grades**

4-7

## **Subject**

Health → Tie in to Science and Art

## **Duration**

2-3 class periods. Two if students are allowed to work on the posters in Art.

## **Materials**

- Magazines
- Pamphlets
- Markers
- Scissors
- Tape
- Poster board
- Butcher paper
- Construction paper (colors)
- Glue
- Colored pencils
- Crayons
- List of Hazardous Substances

## **Objectives**

TSWBAT design a poster intended to educate others about the harmful health effects of a hazardous substance.

## **Set**

Discuss how various chemicals are classified as hazardous substances. Discuss, in general, how hazardous substances can impact human health.

Ask students if they can identify any hazardous substances that might be in their community or region of the state.

## **Instructional Input**

Explain the purpose of the poster (to educate the public in order to protect human health). Have examples on hand. Next, discuss the requirements and expectations. Students should use actual objects; magazine/pamphlet cut outs, drawings, computer graphics, and text to explain the main concepts of their poster. *Art tie in.*

Before creating posters:

1. Go over the grading requirements. See evaluation below.
2. Stress proper use and sharing of materials.

### 3. STRESS clean up!

#### Evaluation

Evaluation will be based on the educational quality of the student's poster, as well as aesthetic aspects of the poster's layout. *Tie in to Art.* Rubrics for the requirements are included with this lesson. However, you may choose to develop your own or, better yet, develop them with the class.

Concepts which must be addressed include:

- Identify the substance with its correct name and chemical symbol.
- Discuss what the substance looks, feels, smells, and tastes like (physical properties).
- Where does it come from? What types of activities produce it?
- How can humans be exposed?
- How can human health be effected?
- How can humans protect against exposure to this hazardous substance?

#### Poster Rubric

Category	Excellent _____ points	Good _____ points	Room for Improvement _____ points
Neatness	Well constructed. Papers glued down neatly. Coloring and cutouts are neat.	Some of the pictures are peeling at the corners. Writing, coloring, and pictures are well done, not perfect.	Writing, coloring, and pictures were not carefully completed. Pictures are peeling off.
Legibility	All words can be easily read from a distance of 2 feet.	Most words can be easily read from a distance of 2 feet.	Many words can not be read from a distance of 2 feet.
Spelling and Grammar	No spelling or grammar mistakes.	Few (<5) spelling or grammar mistakes.	Many (>5) spelling or grammar mistakes.
Graphics	All graphics are neat and help explain main concepts.	Most graphics are neat and help explain some of the poster's concepts.	Few graphics are neat and most do not explain concepts in the poster.
Concepts	All concepts are correctly addressed.	Most concepts are addressed correctly.	Few concepts are addressed correctly.

Provide examples of posters and let the students use the rubric to judge the examples. This helps them to assess their own work using the rubric. If you wish, the students can peer critique each other's posters prior to finalizing and handing them in.

## **Closure**

Hang up the posters in your classroom, the hall, or the library. As appropriate, encourage discussion about how hazardous substances effect people's health using specific examples from the posters. Examples with local relevancy are extremely valuable here.

Submit copies of the most outstanding posters to the Idaho Division of Health. Students will receive a mailed certificate and will be eligible to compete in the Bureau of Environmental Health and Safety poster contest.

## **Resources**

Here are some excellent sites for identifying and listing hazardous substances. These sites also contain information that will be useful for the students as they research the substance of their choice.

Brief summary of many different hazardous substances.

[http://www.nce.unr.edu/swp/water\\_factsheets.htm](http://www.nce.unr.edu/swp/water_factsheets.htm)

Excellent links to many hazardous substances identified by the EPA.

<http://www.epa.gov/ebtpages/pollutants.html>

ATSDR's ToxFAQs – extensive fact sheets on many hazardous substances.

<http://www.atsdr.cdc.gov/toxfaq.html>

Top 20 Hazardous Substances.

<http://www.atsdr.cdc.gov/cxcx3.html>